Johnson, James

From: Tapia, Cecilia
Sent: Sunday, March 09, 2014 2:03 PM
To: Hayes, Scott; Johnson, James; Mahler, Tom
Cc: Gravatt, Dan; Field, Jeff; Jackson, Robert W.; Nold, Eric; Buchholz, Ken
Subject: Re: air monitoring specifics---- to do ASAP

In about 1 week.

From: Hayes, Scott
Sent: Sunday, March 09, 2014 11:45:15 AM
To: Tapia, Cecilia; Johnson, James; Mahler, Tom
Cc: Gravatt, Dan; Field, Jeff; Jackson, Robert W.; Nold, Eric; Buchholz, Ken
Subject: RE: air monitoring specifics---- to do ASAP

Tom is on travel this week doing his mandatory inspection training. I know James had some inspection work he was trying to get done too. What is the goal for a date on getting monitoring in place?

Scott D. Hayes
Chief, Emergency Response & Removal South
Co-Chair, Region 7 Regional Response Team
US Environmental Protection Agency
11201 Renner Boulevard
Lenexa, Kansas 66219
913-551-7670 (o)
913-645-3217 (m)

From: Tapia, Cecilia
Sent: Saturday, March 08, 2014 12:02 PM
To: Hayes, Scott; Johnson, James; Mahler, Tom
Cc: Gravatt, Dan; Field, Jeff; Davis, Michael; Hammerschmidt, Ron; Hankins, Teri; Jackson, Robert W.
Subject: Fw: air monitoring specifics---- to do ASAP

James and tom. Please initiate a task order w start to set up background monitoring asap at the Westlake site. Coordinate all activities with mike Davis (from the lab) , chuck hooper and dan Gravatt and jeff field.

See Teri for funding from the special account.

From: Hooper, Charles A.
Sent: Friday, March 07, 2014 3:59:28 PM
To: Tapia, Cecilia; Hammerschmidt, Ron
Cc: Gravatt, Dan; Jefferson, Matthew; Dempsey, Gregg D.
Subject: air monitoring specifics

Cecilia,
I think thinks gets more into the specifics that you need. If someone sees something I've left out please let Cecilia and me know asap.

Three main monitoring components for radiation monitoring:

1) Particulate – Radeco's

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2) Radon Alpha spec / E-perms
3) Dosimetry – TLD's

There are eight radionuclides of concern from previous documents: U-238, U-235, U-234, Th-232, Th-230, Ra-226, Pa-231 & Pb-210.

Number and location of monitoring areas: 1 at the Transfer Station, 1 at the Weigh Station, 2-3 along St. Charles Rock Road, 1 at a point to the south to be determined, 2-3 at nearest residential areas. As well as 2 background locations at local fire/police departments, TBD.

1) Particulate:
+Equipment: Comparable to a Radeco H810 (1-2 CFM) with 2-inch glass fiber filters. These sampler units will need A/C power, concrete pad, and sampler housing with lock.
+Laboratory analysis for each filter on a **weekly** basis.
+Alpha and beta detection limits: 1/10th of the value in 10 CFR 20, Appendix B, Column 3 (inhalation DAC) for most limiting radionuclide.
+Gamma spectrometry for any sample with a result above the detection limit.
+Blank filters submitted each week with batch and counted in order to be subtracted to get net counts (or consistent with requirements of the laboratory). Background locations will be compared to limits and not subtracted.
+ Wait Time: At least 5 days wait time before the start of the analytical testing to account for the decay of Rn-220/Pb-212 (or consistent with requirements of the laboratory).

2) Radon
+Alpha track detectors, place 2 at each monitoring location and background location and collect every **month**. (E-perm radon detector electrets or short-term residential test kits may be substituted based on duplicates or shorter time-frame requirements). Alpha track detectors are recommended for 90-365 day exposure periods, a minimum of at least 30-days is required for most test kit vendors. (*Based on this we might want to go with something with a shorter exposure period.*)
+Results will be compared with the EPA residential recommendation level of 4 pCi/l.
+An hourly barometric pressure reading in the local area is useful for outdoor radon measurments as barrometric pressure and soil moisture are factors that affect natural radon emanation from the ground.

3) Dosimetry
+**Monthly** gamma dosimeters placed at each monitoring location including background locations.
+Optically stimulated luminescence (OSL) dosimeters provide lower detection limits and are preferred over Thermoluminescent dosimeters (TLD).
+Background locations will house control dosimeters that will be subtracted from the monitoring locations to determine absorbed dose.

-Chuck

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